CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. R7-2002-1000
NPDES NO. CAG917001

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND GENERAL WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF EXTRACTED AND TREATED GROUNDWATER RESULTING FROM THE CLEANUP OF GROUNDWATER POLLUTED BY VOLATILE ORGANIC CONSTITUENTS INTO SURFACE WATERS

The California Regional Water Quality Control Board, Colorado River Basin Region finds that:

1. On September 22, 1989, the United States Environmental Protection Agency (USEPA), Region IX, authorized the State of California to issue general NPDES permits in accordance with Title 40 of the Code of Federal Regulations (CFR), part 122.28. Title 40 CFR 122.28 allows for the issuance of general permits to regulate categories of discharges if the sources within each category:

   a. Involve the same or substantially similar types of operations;

   b. Discharge the same types of waste;

   c. Require the same effluent limitations or operating conditions;

   d. Require the same or similar monitoring; and

   e. Are more appropriately controlled under a general permit than under individual permits.

2. On June 11, 1998, the Regional Board adopted General Waste Discharge Requirements (WDRs) Order No. 98-400 (NPDES Permit No. CAG917001) in accordance with 40 CFR 122.28 to regulate discharges of extracted and treated groundwater resulting from the cleanup of groundwater polluted by volatile organic compounds (VOCs) into surface waters. Pollution of these sites is typically caused by leaky containment vessels for fuel, solvents, and other wastes at service stations and similar operations. Recent developments in treatment technology, laboratory detection methods, and State water quality criteria for these constituents have made it necessary to revise Order No. 98-400.

3. This general permit updates Order No. 98-400 and establishes WDRs for discharges resulting from the cleanup of VOC polluted groundwater. Cleanup of these sites involve similar treatment technologies and result in similar waste discharges. The regulation of these discharges includes similar effluent limits and monitoring requirements. Consequently, these discharges are efficiently regulated with a general permit.

4. VOCs of concern include petroleum hydrocarbons (gasoline, diesel, kerosene, fuel oil, and heavier ranges), purgeable hydrocarbons, aromatic hydrocarbons, and fuel octane enhancers (methyl tertiary butyl ether (MTBE), methanol, ethanol, tertiary butyl alcohol (TBA), and di-isopropyl ether).

5. Entities subject to this Regional Board Order (parties deemed responsible by the Regional Board for remediation of groundwater polluted by VOCs) are hereinafter referred to as the Discharger(s).

6. California regulations establish an annual fee schedule, based on the discharger's Threat to Water Quality and Complexity. (California Code of Regulations, Title 23, Division 3, Chapter 9, Article 1 (§ 2200 et. seq.)). The dischargers to be regulated under this General Permit have a Threat to Water Quality and Complexity Rating of III-b. The annual fee associated with this rating is currently $750. This fee is subject to change.

7. Discharges that are authorized under this General Permit must meet the following criteria:

    a. Pollutant concentrations in the discharge do not (a) cause, (b) have a reasonable potential to cause, or (c) contribute to an excursion above any applicable water quality objectives;

    b. The discharge does not include water added for the purpose of diluting pollutant concentrations; and

    c. Pollutant concentrations in the discharge will not cause or contribute to degradation of water quality or impair beneficial uses of receiving waters.

8. Wastewater from a groundwater cleanup project can include the following and may be produced and treated on a continuous or batch basis:

    a. Treated groundwater from the cleanup of VOC contamination;

    b. Groundwater pumped from beneath a layer of free product in order to establish a cone of depression to aid in the containment and extraction of pollutants;

    c. Potentially polluted groundwater extracted during short- and long-term pump tests;

    d. Potentially polluted well development water; and/or

    e. Potentially polluted water purged prior to well sampling.

9. Only minor discharges shall be eligible for coverage under this general permit. Discharges that exceed 1.0 MGD are classified as major discharges by the USEPA and shall not be authorized to discharge under this general permit.

10. Dischargers that satisfy the criteria set forth in Finding Nos. 6, 7, and 8 of this order shall submit the following items at least 60 days prior to the start of a new discharge to be eligible for coverage under this General Permit:

    a. A completed Notice of Intent (NOI) (Attachment A);
    b. A completed Report of Waste Discharge (ROWD) (Form 200);
    c. A completed NPDES Application Form 1;
    d. A completed NPDES Application Form 2D;
    e. The appropriate filing fee;
    f. An engineering report (Report) containing the following information:

        i. A discussion of how the proposed discharge is consistent with the type of discharge

eligible for coverage under this General Permit;

ii. An explanation of why a discharge to surface waters is the only feasible method for disposing of the treated effluent supported by a letter from the local publicly owned treatment works (POTW) stating that they cannot accept the discharge;

iii. A general discussion of the proposed cleanup project including descriptions of the extraction method, treatment processes, design parameters, flow rates and expected treatment performance.

iv. A schematic of the treatment process;

v. A site map showing the extraction wells, monitoring wells, treatment site, and the storm drain or surface water discharge location; and

vi. A map showing the path from the point of initial discharge to the ultimate location of discharge.

11. If the Regional Board's Executive Officer finds that the proposed discharge qualifies for coverage under this Board Order, the Discharger shall be issued a Notice of Applicability (NOA). Individual dischargers are not covered by this Board Order until they have been issued the NOA. If a proposed discharge does not quality for this general permit, it may receive its own NPDES permit.

12. This Board Order updates the WDRs to comply with the current laws and regulations as set forth in the California Water Code and the California Code of Regulations.

13. The Regional Board adopted the Regional Water Quality Control Plan (Basin Plan) for the Colorado River Basin Region on November 17, 1993. The Basin Plan designates the beneficial uses and contains water quality objectives for ground and surface waters in this Region.

14. The action to adopt an NPDES Permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA: Public Resources Code Section 21000, et. seq.), pursuant to Section 13389 of the California Water Code. The proposed discharge is consistent with the anti-degradation provisions of 40 CFR 131.12 and State Water Resources Control Board (SWRCB) Resolution No. 68-16. If terms of the permit are met, the impact on water quality will be insignificant, including potential impacts on aquatic life, which is the beneficial use most likely affected by the discharge. The conditions and effluent limitations established in this Board Order for discharges of treated groundwater to surface waters in this Region ensure that the existing quality of waters in the Region will be maintained and protected.

15. The USEPA adopted the National Toxics Rule (NTR) (40 CFR 131.36), which requires effluent limitation for all pollutants that are or may be discharged at a level that will cause, or have the reasonable potential to cause or contribute to an in-stream excursion above a narrative or numeric water quality standard.

16. On May 18, 2000, the USEPA published the adopted California Toxics Rule (CTR). The CTR promulgates new criteria for both human health protection and protection of aquatic life. New numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for

57 priority toxic pollutants are listed. In addition, the CTR contains a compliance schedule provision, which authorizes the State to issue schedules of compliance for new or revised NPDES permit limits based on the federal criteria when certain conditions are met.

17. On March 2, 2000, the SWRCB adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (California Toxics Policy). This Policy establishes (1) implementation provisions for priority pollutant criteria promulgated by the USEPA through the NTR and CTR and for priority pollutant objectives established by the Regional Water Quality Control Boards (Regional Boards) in their water quality control plans; (2) monitoring requirements for 2, 3, 7, 8- tetrachlorodibenzo-p-dioxin (TCDD) equivalents; and (3) chronic toxicity control provisions. The California Toxics Policy allows Regional Boards to exempt low volume discharges that no significant adverse impact on water quality from the monitoring requirements of the California Toxics Policy. The California Toxics Policy also authorizes Regional Boards to grant categorical exceptions to discharges resulting from resource management or the fulfillment of the federal Safe Drinking Water Act or the California Health and Safety Code. The discharges authorized under this General Permit are determined to have no significant impact on water quality and/or to meet the conditions for a categorical exception from the California Toxics Policy.

18. Effluent and receiving water limitations in this Board Order are based on the Federal Clean Water Act, Basin Plan, SWRCB's plans and policies, USEPA guidance and regulations, best professional judgment, and best available technology economically achievable.

19. Effluent limitations and toxic and pretreatment effluent standards, established pursuant to Section 208(b), 301, 302, 304, and 307 of the Federal Clean Water Act (CWA) and amendments thereto that are applicable to this discharge are implemented in this Board Order.

20. Regional Board staff prepared a Statement of Basis regarding this general permit. The Statement of Basis is incorporated into this permit by this reference.

21. The Board has notified the discharger and all known interested agencies and persons of its intent to renew and update the NPDES Permit and WDRs for said discharge, and has provided them with an opportunity for a public meeting and an opportunity to submit comments.

22. The Board, in a public meeting, heard and considered all comments pertaining to this discharge.

23. This Board Order shall serve as an NPDES permit pursuant to Section 402 of the Clean Water Act (CWA), and amendments thereto, and shall take effect upon the date of hearing, provided EPA has no objections.

IT IS HEREBY ORDERED, that Board Order No. 98-400 is terminated, and in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Clean Water Act, and regulations and guidelines adopted thereunder, all dischargers covered under this General Permit shall comply with the following:

B. Effluent Limitations

1. Representative samples of treated groundwater discharged to surface waters shall not contain constituents in excess of the limits indicated below. Each treatment system discharging to surface waters shall be monitored separately at locations which are acceptable to the Regional Board's Executive Officer or his designee:

   a. Effluent Limitations for discharges to surface waters with a designated beneficial use of Municipal and Domestic Supply (MUN) in the CRBR Basin Plan (see Basin Plan Tables 2-2, 2-3, and 2-4):

EFFLUENT LIMITS FOR MUNICIPAL DESIGNATED WATERS	
Constituent	Instantaneous Maximum (μg/L[1])
Benzene	1.0
Carbon Tetrachloride	0.25
Chloroform	100
1,1-Dichloroethane (1,1-DCA)	5.0
1,2-Dichloroethane (1,2-DCA)	0.38
1,1-Dichloroethylene (1,1-DCE)	0.057
cis-1,2-Dichloroethylene	6
trans-1,2-Dichloroethylene	10
Dichloromethane (Methylene Chloride)	4.7
Di-isopropyl ether (DIPE)	5
Ethanol	5
Ethyl benzene	30
Total Lead	15
Methanol	5
Methyl tertiary-butyl ether (MTBE)	13
Tertiary-amyl methyl ether (TAME)	5
Tetrachloroethylene (PCE)	.8
Toluene	40
Total Petroleum Hydrocarbons (TPHs)	100
1,1,1-Trichloroethylene (1,1,1-TCA)	200
1,1,2-Trichloroethylene (1,1,2-TCA)	0.6
Trichloroethylene (TCE)	2.7
Trichlorotrifluoroethane	5
Vinyl Chloride	0.5
Total Xylenes	20

   b. Effluent Limitations for discharges to surface waters NOT designated as MUN in the CRBR Basin Plan (see Basin Plan Tables 2-2,2-3,and 2-4):

EFFLUENT LIMITS FOR NON-MUNICIPAL DESIGNATED WATERS	
Constituent	Instantaneous Maximum (ug/L)

[1] μg/L – micrograms-per-Lilter

Benzene		70
Carbon Tetrachloride		4.4
Chloroform		100
1,1-Dichloroethane (1,1-DCA)		5.0
1,2-Dichloroethane (1,2-DCA)		99
1,1-Dichloroethylene (1,1-DCE)		3.2
cis-1,2-Dichloroethylene	10	
trans-1,2-Dichloroethylene		140,000
Dichloromethane (Methylene Chloride)		1,600
Di-isopropyl ether (DIPE)		5
Ethanol		1,000
Ethyl benzene		29,000
Total Lead		15
Methanol		1000
Methyl tertiary-butyl ether (MTBE)		13
Tertiary-amyl methyl ether (TAME)		5
Tetrachloroethylene (PCE)		8.85
Toluene		200,000
Total Petroleum Hydrocarbons (TPHs)		100
1,1,1-Trichloroethylene (1,1,1-TCA)		200
1,1,2-Trichloroethylene (1,1,2-TCA)		42
Trichloroethylene (TCE)		81
Trichlorotrifluoroethane		5
Vinyl Chloride		525
Total Xylenes		1750

2. The hydrogen ion (pH) of the treated effluent shall be maintained within the limits of 6.0 to 9.0.

3. There shall be no acute or chronic toxicity in the treatment plant effluent nor shall the treatment plant effluent cause any acute or chronic toxicity in the receiving water. All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or indigenous aquatic life. Compliance with these objectives will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, or bioassays of appropriate duration or other appropriate methods specified by the Regional Board.

C. Receiving Water Limitations

1. Receiving water limitations are based upon water quality objectives contained in the Basin Plan. As such, they are a required part of this permit. The discharge shall not cause the following in waters of the State:

   a. Depress the concentration of dissolved oxygen below 5.0 mg/L. When dissolved oxygen in the receiving water is already below 5.0 mg/L, the discharge shall not cause any further depression.
   b. The presence of oil, grease, floating material (liquids, solids, foam and scum) or suspended material in amounts that create a nuisance or pollution, or adversely affect beneficial uses.

   c. Result in the deposition of pesticides or combination of pesticides to be detected in concentrations that adversely affect beneficial uses.

   d. Aesthetically undesirable discoloration or odors in the receiving water.

   e. A significant increase in fungi, slime, or other objectionable growth.

f. Increase turbidity that affects beneficial uses.

g. The normal ambient pH to fall below 6.0 or exceed 9.0 units.

h. Impact the receiving water temperature, adversely affecting beneficial uses.

i. Result in the deposition of material that causes nuisance or pollution, or adversely affects beneficial uses.

j. The chemical constituents to exceed concentrations that adversely affect beneficial uses or create nuisance or pollution.

k. Toxic pollutants to be present in the water column, sediments or biota in concentrations that adversely affect beneficial uses or that produce detrimental physiological responses in human, plant, animal, or aquatic life.

l. Taste or odor-producing substances to impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to cause or otherwise adversely affect beneficial uses.

2. This discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the SWRCB as required by the Federal Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Regional Board will revise and modify this Permit in accordance with such more stringent standards.

D. Prohibitions

1. Bypass, overflow, discharge or spill of untreated or partially treated groundwater is prohibited.

2. The discharge of waste to land not owned or controlled by the discharger is prohibited.

3. Discharge of treated wastewater at a location or in a manner different from that approved by the Regional Board's Executive Officer is prohibited.

4. The bypass or overflow of untreated groundwater to waters of the State is prohibited, except as allowed in the Standard Provision No. 13, as contained in the Standard Provisions for National Pollutant Discharge Elimination System (NPDES) Permit (hereinafter Standard Provisions), dated October, 1990.

5. The discharger shall not extract groundwater for treatment in excess of the design capacity of the treatment system as specified in the Dischargers NOA from the Executive Officer.
6. Discharge of material other than extracted and treated groundwater from the investigation and cleanup of VOC polluted groundwater and added treatment chemicals approved by the Regional Board's Executive Officer is prohibited.

E. Specifications

1. The treatment or disposal of wastes from the facility shall not cause pollution or nuisance as defined in Section 13050(l) and 13050(m) of Division 7 of the California Water Code.

2. No changes in the type or amount of treatment chemicals added to the treatment process shall

be made without the written approval of the Regional Board's Executive Officer.

3. The discharge shall not cause degradation of any water supply.

4. Bioassays shall be performed to evaluate the toxicity of the treated groundwater in accordance with the following procedures unless otherwise specified by the Regional Board's Executive Officer or his designee:

   a. Bioassays shall be conducted on a sensitive fish species and an invertebrate species as approved by the Regional Board's Executive Officer. Pimephales promelas (fathead minnow) and Ceriodaphnia dubia (water flea) are suggested test species that may be utilized. The bioassays shall be conducted in accordance with the protocol given in EPA/600/4-91/002 – Short Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Freshwater Organisms, 3rd Edition, and EPA/600/4-90/027F-Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters for Freshwater and Marine Organisms, 4th Edition.

   b. The bioassay test shall be performed as specified in the Monitoring and Reporting Program.

5. Any chronic toxicity test that exceeds 2 chronic toxicity units (TU_c) or a three-sample median[2] (consecutive samples) that exceeds 1 TU_c may trigger an accelerated monitoring frequency. In addition, any acute toxicity test results showing high toxicity may trigger an accelerated monitoring frequency. High acute toxicity is defined as follows:

   a. Less than 90% survival when acute toxicity is calculated from the results of the acute toxicity test, or

   b. Less than 80% survival when acute toxicity is calculated from results of the chronic toxicity test, or

   c. Results of acute toxicity t-test for 100% effluent concentration that is reported as failed.

6. Accelerated monitoring frequency shall consist of performing three (3) toxicity tests in a six (6)-week period following the first exceedence of the chronic or acute toxicity triggers.

7. A Toxicity Identification Evaluation (TIE) may be triggered if testing from the accelerated monitoring frequency indicate any of the following:

   a. A chronic toxicity of 2 TU_c or greater; or

   b. The three-sample median exceeds 1 TU_c; or

   c. Result of acute toxicity t-test for 100 percent effluent concentration that is reported as failed; or

   d. Less than 80% survival when acute toxicity is calculated from results of the chronic toxicity test; or

[2] 3-Sample median is defined as follows: The middle value of 3 consecutive samples arranged from the low value to the high value.

e. Less than 90% survival when acute toxicity is calculated from the results of the acute toxicity test.

8. The TIE shall be conducted to identify and evaluate toxicity in accordance with procedures recommended by the USEPA which include the following:

   a. Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I, (USEPA, 1992a);

   b. Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures, Second Edition (USEPA, 1991a);

   c. Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Sampling Exhibiting Acute and Chronic Toxicity (USEPA, 1993a);

   d. Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity (USEPA, 1993b);

9. If repeated toxicity tests reveal toxicity, the discharger may be required to conduct a Toxicity Reduction Evaluation (TRE). The discharger shall take all reasonable steps to control toxicity once the source of the toxicity is identified. A failure to conduct required toxicity tests or a TRE within a designated period shall result in the establishment of numerical effluent limitations for chronic toxicity in a permit or appropriate enforcement action. Recommended guidance in conducting a TRE include the following:

   a. Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, August 1999, EPA/833B-99/002;

   b. Clarifications Regarding Toxicity Reduction and Identification Evaluations in the NPDES Program dated March 27, 2001, USEPA Office of Wastewater Management, Office of Regulatory Enforcement.

10. The groundwater treatment facility shall be protected from any washout or erosion of wastes or covering material, and from any inundation, that could occur as the result of floods having a predicted frequency of once in 100 years.

F. Provisions

1. This Board Order serves as a General NPDES Permit pursuant to Section 402 of the Federal Clean Water Act, as amended. This General Permit will become effective at the end of the date of adoption by the Regional Board, provided the Regional Administrator of the USEPA has no objections.

2. Board Order No 98-400 will be terminated as of the effective date of this General Permit. Dischargers previously authorized to discharge under Board Order No. 98-400 must submit an NOI within 45 days of the effective date of this order, and be issued a new authorization to discharge by the Executive Officer. Other information may be required by the Executive Officer before authorizing enrollment under this General Permit (Board Order No. R7-2002-1000).

3. Unless otherwise revoked, this Board Order expires five years from date of adoption, on June 26, 2007. However, it shall continue in force and effect until a new order is issued. Upon reissue of a new order, the dischargers shall file a NOI within 45 days of the effective date of the new order and obtain a new authorization to discharge from the Executive Officer.

4. If the Regional Board's Executive Officer determines, based on information submitted in accordance with Finding No. 10, that the proposed discharge is eligible for coverage under this General Permit, a Notice of Applicability (NOA) will be issued and the proposed discharge becomes an "authorized discharge." The NOA will specify the maximum discharge flow rate (which also limits the mass loading rate for each constituent) and any other limits or provisions necessary for the individual discharge. The NOA can be terminated or revised by the Board's Executive Officer at any time.

5. If the concentration of tertiary-butyl alcohol (TBA) in the effluent of a discharge exceeds 12 μg/L, the discharger shall take three (3) additional samples during the following quarter and conduct activities as explained in the Provisions 6, 7, or 8.

6. If the results of the three (3) additional samples for the effluent **do not** exceed the triggers (Case 1), the discharger shall report the results to the Executive Officer in the next Self-Monitoring Report, and shall return to the schedule of sampling and analysis in the Self-Monitoring Program.

7. If the results of **any one (1) of the three (3)** additional samples exceed the triggers (Case 2), the discharger has two (2) options of submitting a rational for not doing the special studies explained below or performing the following:

    a. Calculate the median and maximum concentration values for TBA, using the three (3) recent samples **and** all samples collected and analyzed for that constituent in the previous 12-month period.

    b. Estimate the mass load discharged in the previous12-month period for TBA. Report the results in grams per day and pounds per year, using the average flow rate for the previous 12-month period.

    c. Report the results to the Executive Officer in the next Self-Monitoring Report, and return to the schedule of sampling and analysis in the Self-Monitoring Program.

As an alternative, the discharger may submit a specific technical rational for not conducting the above special studies, subject to the Executive Officer's approval.

8. If the results of two (2) or three (3) of the additional samples exceed the triggers (Case 3), the discharger shall perform the following:

    a. Calculate median and maximum concentration values and mass load for TBA, as described in Case 2 above.

    b. Explain or identify source(s) of the TBA.

    c. Define the properties of TBA.

    d. Document what standard or customized EPA approved test methods are used to detect this compound (TBA).

e. List and evaluate all available technologies for treatment or pre-treatment of TBA. This evaluation may include the cost of increased treatment to reduce the constituent(s) of TBA, and the amount of reduction in terms of concentration.

f. Discuss any proposed plan for pilot bench scale and field tests for treatment of TBA and associated timetable.

g. Determine best available technology economically achievable for treatment of TBA or propose the next step after obtaining the results of the pilot tests.

h. If the results of the evaluation indicates that treatment of the discharge does not appear to be a feasible option, then:

   1) Perform an evaluation of the potential adverse impacts to the beneficial uses of the receiving water. The evaluation should include, but need not be limited to, description of the beneficial uses specific to the receiving water, physical and chemical characteristics of the water body and sediment, and the physical, chemical, or biological effects from the constituent(s) on the beneficial uses.

   2) If the receiving water study finds that the discharge has potential to cause adverse impacts to beneficial uses of the receiving water, then evaluate control measures other than treatment to reduce TBA in the discharge, such as re-evaluating options for re-use, discharge to POTW, or alternatives to groundwater extraction.

i. Within 180 days of the discharger receiving results of the confirmation sampling, report the results of tasks (a) through (h) above to the Executive Officer, including a proposed method to eliminate or minimize future exceedences, or provide a rationale for why no change to the existing treatment program should take place. The discharger may be required to perform additional evaluations or take additional actions, as deemed necessary by the Executive Officer.

As an alternative, the discharger may submit a specific technical rational for not conducting the above special studies, subject to the Executive Officer's approval.

9. If the concentration of TBA exceeds 12 μg/L within 60 months after completion of the required tasks in Provisions 6, 7, or 8, then the Executive Officer may waive the evaluation required above.
10. The USEPA Administrator may request that the Regional Board's Executive Officer require any authorized Discharger to subsequently apply for and obtain an individual NPDES permit. Any interested person may petition the Regional Board's Executive Officer or the USEPA Regional Administrator to take action under this provision. Situations that may require an individual NPDES permit include the following:

    a. The Discharger is not in compliance with the conditions of this Board Order or the NOA;

    b. Changes in technologies or practices that impact the control or abatement of pollutants in the discharge;

    c. New or revised effluent limitation guidelines are promulgated for the category of discharges covered by this permit;

    d. A water quality control plan is adopted that contains requirements applicable to the discharges covered by this permit is adopted; of

e. The requirements of 40 CFR 122.28(a) are not being met.

11. If the Discharger wishes to terminate authorization under this General Permit, the Discharger shall submit a completed Notice of Termination (NOT) (included with this General Permit as Attachment B). Termination from coverage will occur on the date specified in the NOT unless the Regional Board notifies the Discharger otherwise. All discharges shall cease before the date of termination, and any discharges to surface waters on or after this date shall be considered in violation of the CWA unless covered by another NPDES permit.

12. The discharger shall comply with all conditions of this Board Order. Noncompliance constitutes a violation of the Federal Clean Water Act and Porter-Cologne Water Quality Control Act, and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification of WDRs, or denial of a Permit renewal application.

13. The discharger shall comply with Standard Provisions dated October 1990 (attached).

14. The discharger shall comply with Monitoring and Reporting Program No. R7-2002-1000, and future revisions thereto, as specified by the Regional Board's Executive Officer.

15. The discharger shall ensure that all site-operating personnel are familiar with the content of this Board Order, and shall maintain a copy of this Board Order at the site.

16. The discharger shall, at all times, properly operate and maintain all systems and components of collection, treatment and control which are installed or used by the discharger to achieve compliance with the conditions of this Board Order. Proper operation and maintenance includes effective performance, adequate process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of this Board Order. All systems both in service and reserved, shall be inspected and maintained on a regular basis. Records shall be kept of the inspection results and maintenance performed and made available to the Regional Board upon demand.

17. Unless otherwise approved by the Regional Board's Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. All analyses shall be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants", promulgated by the USEPA.

18. The Discharger shall report any noncompliance that may endanger human health or the environment. The Discharger shall immediately report orally information of the noncompliance as soon as (1) the Discharger has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures, to the Regional Board office and the Office of Emergency Services. During non-business hours, the Discharger shall leave a message on the Regional Board office voice recorder. A written report shall also be provided within five (5) business days of the time the Discharger becomes aware of the incident. The written report shall contain a description of the noncompliance and its cause, the period of noncompliance, the anticipated time to achieve full compliance, and the steps taken or planned, to reduce, eliminate, and prevent recurrence of the noncompliance.

19. The discharger shall allow the Regional Board, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

    a. Enter upon the premises regulated by this Board Order, or the place where records must be kept under the conditions of this Board Order;

b. Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this Board Order;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Board Order; and

d. Sample or monitor at reasonable times, for the purpose of assuring compliance with this Board Order or as otherwise authorized by the California Water Code, any substances or parameters at this location.

20. The discharger shall comply with the following:

    a. Samples and measurements taken for monitoring purposes shall be representative of the monitored activity.

    b. The discharger shall retain records of all monitoring information for a period of at least 5 years from the date of the sample, measurement, or report including:

        i. Laboratory analytical reports;
        ii. Calibration and maintenance records;
        iii. Original strip chart recordings for continuous monitoring instrumentation;
        iv. Copies of all reports required by this Board Order; and
        v. Records of all data used to complete the application for this Board Order.

    c. Records of monitoring information shall include:

        i. The date, exact place, and time of sampling or measurements.
        ii. The individual(s) who performed the sampling or measurements.
        iii. The date(s) analyses were performed.
        iv. The individual(s) who performed the analyses.
        v. The results of such analyses.

21. Prior to any change in ownership or management of this operation, the discharger shall transmit a copy of this Board Order to the succeeding owner/operator, and forward a copy of the transmittal letter to the Regional Board.

22. Prior to any modifications in this facility, which would result in material change in the quality or, quantity of groundwater treated or discharged, or any material change in the location of discharge, the discharger shall report all pertinent information in writing to the Regional Board and obtain revised requirements or a revised NOA before any modifications are implemented.

23. The discharger shall provide adequate notice to the Regional Board's Executive Officer of the following:

    a. Any substantial change in the volume or characteristics of pollutants being introduced into any of the treatment facilities described in the Findings of this Board Order by an existing or new source.

    b. Any planned physical alterations or additions to the facilities described in the NOI and engineering Report, or changes planned in the discharger's disposal practice, where such alterations, additions, or changes may justify the application of conditions that are different from or absent in the existing General Permit.

24. Adequate measures shall be taken to assure that flood or surface drainage waters do not erode or otherwise render portions of the treatment facility inoperable.

25. This Board Order does not authorize violation of any federal, state, or local laws or regulations

26. This Board Order does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

27. This Board Order may be modified, rescinded and reissued, for cause. The filing of a request by the discharger for a Board Order modification, rescission and reissuance, or a notification of planned changes or anticipated noncompliance does not stay any Board Order condition. Causes for modification include the promulgation of new regulations, modification of land application plans, or modification in sludge use or disposal practices, or adoption of new regulations by the SWRCB or the Regional Board, including revisions to the Basin Plan.

I, Philip A. Gruenberg, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the Regional Water Quality Control Board, Colorado River Basin Region, on June 26, 2002.

_____

Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. R7-2002-1000
FOR
DISCHARGES OF EXTRACTED AND TREATED GROUNDWATER
RESULTING FROM THE CLEANUP OF GROUNDWATER POLLUTED BY
VOLATILE ORGANIC CONSTITUENTS INTO SURFACE WATERS

MONITORING

1. The collection, preservation and holding times of all samples shall be in accordance with United States Environmental Protection Agency (USEPA) approved procedures. Unless otherwise approved by the Regional Board's Executive Officer, all analyses shall be conducted by a laboratory certified by the State Department of Health Services. All analyses shall be conducted in accordance with the latest edition of the "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR Part 136), promulgated by the USEPA.

2. Samples shall be collected at the location specified in the Notice of Authorization (NOA) granted by the Regional Board's Executive Officer. If no location is specified, sampling shall be conducted at the most representative sampling point available.

3. If the facility is not in operation, or there is no discharge during a required reporting period, the discharger shall forward a letter to the Regional Board indicating that there has been no activity during the required reporting period.

START-UP PHASE AND START-UP REPORTING

1. The discharger shall inform the Regional Board in writing of the location of all sampling stations and the expected start-up date at least 10 days prior to beginning operational start-up.

2. During the original start-up of the treatment facility, sampling of the system influent and treated effluent must be performed on the first (1^{st}) and and fifth (5^{th}) day of operation. On the 1^{st} day of operation, the system shall be allowed to run until at least three (3) extraction well volumes are removed and until three (3) consecutive readings taken at least one (1) hour apart for pH, conductivity, and temperature are within five (5) percent of each other. Once these criteria are met, the system influent and treated effluent shall be sampled and submitted for analysis. During this phase of the startup, all system effluent shall be discharged into a holding tank or sanitary sewer (not to the receiving water) until the results of the analysis show that the discharge is within the effluent limits established in Board Order No. R7-2002-1000 and in the NOA.

3. If the analysis of samples collected during the 1^{st} day of operation indicate that the system is in compliance, the system shall be operated for a total of five (5) days with the system effluent being discharged into the receiving water. A second series of samples shall be collected during the fifth day. The effluent may continue to be discharged into the receiving water while the samples are being analyzed if the results are received within 48 hours of sampling. If the samples from the 5^{th} day samples indicate compliance, discharge to the receiving water shall continue.

4. If the treatment system is shut down more that 48 hours during the original start-up, the original start-up procedures and sampling must be repeated.

5. A report on the start-up phase shall be submitted to the Regional Board no more than fifteen calendar days after completion of the start-up phase. The report should contain a summary of all

monitoring results, copies laboratory reports, chain of custody forms, flow rates, and a description of any changes or modifications to the treatment system.

INFLUENT MONITORING

1. Extracted groundwater shall be monitored for the following constituents immediately prior to being treated. All samples shall be taken between 6 a.m. and 6 p.m.:

Constituents	Units	Type of Sample	Sampling Frequency
Gasoline Range Organics (BTEX, MTBE, & Oxygenates) EPA Method 8260/8015	μg/L[1]	Grab	1st and 5th day Semi-Annual thereafter

EFFLUENT MONITORING

1. Treated groundwater shall be monitored for the following constituents. All samples shall be taken between 6 a.m. and 6 p.m.:

Constituents	Units	Type of Sample	Sampling Frequency
Flow Rate	GPD[2]	Continuous	Continuous[3]
PH	pH units	Grab	Daily[3] for 5 days Monthly thereafter
Temperature	°C	Grab	Daily for 5 days Monthly thereafter
Conductivity	u mhos/cm @ 25 °C	Grab	Daily for 5 days Monthly thereafter
Dissolved Oxygen	mg/L[4]	Grab	Daily for 5 days Monthly thereafter
Total Dissolved Solids (TDS)	mg/L	Grab	1st and 5th day Monthly thereafter
Gasoline Range Organics (BTEX, MTBE & Oxygenates) EPA Method 8260/8015	μg/L	Grab	1st and 5th day Monthly 1st quarter Quarterly thereafter
Constituents	**Units**	**Type of Sample**	**Sampling Frequency**
Lead	μg/L	Grab	1st and 5th day Monthly 1st quarter Quarterly 1st year Annually thereafter

[1] μg/L – Micrograms-per-Liter
[2] GPD - Gallons-Per-Day
[3] Reported Monthly
[4] mg/L – milligrams-per-Liter

EFFLUENT TOXICITY TESTING

1. The discharger shall conduct chronic and acute toxicity testing on the treated effluent as follows:

Test	Unit	Type of Sample	Frequency of Test
Chronic Toxicity	TU_c[5]	8-hr Comp	Quarterly 1st year Annually thereafter
Acute Toxicity	TU_a[6]	8-hr Comp	Quarterly 1st year Annually thereafter

2. Both test species given below shall be used to measure chronic and acute toxicity:

Species	Effect	Test Duration (Days)	Reference[7]
Fathead Minnow (Pimephales promelas)	Larval Survival and Growth	7	EPA/600/4-91/002 (Chronic) EPA/600/4-90/027F (Acute)
Water Flea (Ceriodaphnia dubia)	Survival and Reproduction	7	EPA/600/4-91/002 (Chronic) EPA/600/4-90/027F (Acute)

3. Toxicity Test References:

   a. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition, EPA/600-4-90-027F, August, 1993.

   b. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water for Freshwater Organisms, Third Edition, EPA/600/4-91/002, July 1994.

   c. Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the National Pollutant Discharge Elimination System (NPDES) Program, EPA 833-R-00-003, June 2000.

   d. Method Guidance and Recommendations for Whole Effluent Testing, EPA 821-B-00-004, July 2000.

   e. Clarifications Regarding Flexibility in 40 CFR Part 136 Whole Effluent Toxicity (WET) Test Methods, memorandum dated April 10, 1996 from Tudor Davies, Director of the EPA Office of Water's Office of Science and Technology.

[5] TU_c - Chronic Toxicity Units
[6] TU_a - Acute Toxicity Units
[7] Additional references are listed in the Toxicity Test Reference Section.

QUALITY ASSURANCE

1. Dilution and control waters may be obtained from an unaffected area of receiving waters. Synthetic (standard) dilution is an option and may be used if the above source is suspected to have toxicity greater than 1.0 TU_c

2. A series of at least five (5) dilutions and a control shall be tested for chronic toxicity testing and may be used for acute toxicity testing. The series shall include the following concentrations: 12.5, 25, 50, 75, and 100 percent effluent.

3. For the acute toxicity testing using a t-test, two (2) dilutions shall be used, i.e., 100 percent effluent and a control (when a t-test is used instead of an LC50).

4. If organisms are not cultured in-house, concurrent testing with a referenced toxicant shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests also shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc.).

5. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the toxicity test references, then the permittee must re-sample and retest within 14 days or as soon as possible.

DEFINITION OF TOXICITY

1. Chronic toxicity measures sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms.

2. Chronic toxicity shall be measured in TU_c, where TU_c = 100/NOEC. The no observed effect concentration (NOEC) is the highest concentration of toxicant to which organisms are exposed in a chronic test that causes no observable adverse effect on the test organisms (e.g., the highest concentration of toxicant to which the values for the observed responses are not statistically significantly different from the controls).

3. Acute toxicity is a measure of primarily lethal effects that occur over a 96 hour period. Acute toxicity for Pimephales promelas can be calculated from the results of the chronic toxicity test for Pimephales promelas and reported along with the results of each chronic test. Acute toxicity for Ceriodaphnia dubia cannot be calculated from the results of the chronic toxicity test for Ceriodaphnia dubia because the test design is not amenable to calculation of a lethal concentration (LC50) value as needed for the acute requirement.

4. Acute toxicity shall be measured in Tu_a , where Tu_a = 100/LC50 or as pass/fail using a t-test. LC50 is the toxicant concentration that would cause death in 50 percent of the test organisms.

REPORTING OF BIOASSAY RESULTS

1. The discharger shall submit the analysis and results of the toxicity tests, including any accelerated testing, in toxicity units with the discharge monitoring reports for the month in which the last test is conducted.

REPORTING OF A TOXICITY IDENTIFICATION EVALUATION AND/OR RESULTS OF THE TOXICITY REDUCTION EVALUATION WORKPLAN

1. If a Toxicity Identification Evaluation (TIE) is conducted the discharger shall submit the results of the TIE with the discharge monitoring reports for the month in which the final report is completed.

2. If the Toxicity Reduction Evaluation (TRE) Workplan has been initiated, the discharger shall report on the progress of the actions being taken and include this information with each monthly monitoring report.

REPORTING

1. The discharger shall arrange the data in tabular form so that the specified information is readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the facility is operating in compliance with Waste Discharge Requirements (WDRs).

2. The discharger shall report with each sample result the applicable Minimum Level (as described in the California Toxics Policy) and the laboratory current Method Detection Limit, as determined by the procedure in 40 CFR 136.

3. The discharger shall report the results of acute and chronic toxicity testing, TRE and TIE as required in the previous section entitled, “Effluent Toxicity Testing”.

4. Records of monitoring information shall include:

    a. The date, exact place, and time of sampling or measurement(s);
    b. The individual(s) who performed the sampling or measurement(s);
    c. The date(s) analyses were performed;
    d. The individual(s) who performed the analyses;
    e. The analytical techniques or method used; and
    f. The results of such analyses.

5. The results of any analysis take, more frequently than required at the locations specified in this Monitoring and Reporting Program shall be reported to the Regional Board.

6. Monitoring reports shall be certified under penalty of perjury to be true and correct, and shall contain the required information at the frequency designated in this monitoring report.

7. Each report shall contain the following statement:

    "I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations".

8. A duly authorized representative of the discharger may sign the documents if:

a. The authorization is made in writing by the person described above;

b. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and

c. The written authorization is submitted to the Regional Board's Executive Officer.

9. Reporting of any failure in the remediation project shall be as described in Provision No. 11. Results of any analysis performed as a result of a failure of the remediation project shall be provided within 10 days after collection of the samples.

10. The discharger shall attach a cover letter to the Discharge Monitoring Report. The information contained in the cover letter shall clearly identify violations of the WDRs, discuss corrective actions taken or planned and the proposed time schedule of corrective actions. Identified violations should include a description of the requirement that was violated and a description of the violation.

11. Daily, Semi-Weekly and Monthly monitoring reports shall be submitted to the Regional Board by the 15th day of the following month. Quarterly monitoring reports shall be submitted to the Regional Board by January 15, April 15, July 15, and October 15, of each year. Semi-Annual monitoring reports shall be submitted to the Regional Board by January 15 and July 15 of each year. Annual monitoring reports shall be submitted to the Regional Board by January 15 of each year.

12. Submit monitoring reports to:

    California Regional Water Quality Control Board
    Colorado River Basin Region
    73-720 Fred Waring, Suite 100
    Palm Desert, CA 92260

Ordered by:

_____

Executive Officer

_____

___

Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

STATEMENT OF BASIS
FOR
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
AND
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR
DISCHARGES OF EXTRACTED AND TREATED GROUNDWATER
RESULTING FROM THE CLEANUP OF GROUNDWATER
POLLUTED BY VOLATILE ORGANIC CONSTITUENTS
INTO SURFACE WATERS

Public Notice No. 7-02-10
Application NPDES No. CAG917001
Board Order No. R7-2002-1000

1. Need for General Waste Discharge Requirements (WDRs)

There are currently over 230 cases of soil and/or groundwater pollution in the Colorado River Basin Region (CRBR) resulting from leaks at fuel storage and dispensing facilities and unauthorized discharges of volatile organic compounds (VOCs), including purgeable halocarbons and aromatic compounds, into State waters. More cases are expected. Remedial activities at many of these sites are expected to necessitate discharge of treated groundwater to surface waters within the CRBR. It is anticipated that their number will exceed the capacity of available staff to develop and bring individual tentative WDRs to the Board for adoption. The adoption of a general National Pollutant Discharge Elimination System (NPDES) permit and/or general WDRs will significantly alleviate this problem, and enable the Board to better utilize limited staff resources.

2. Description of General NPDES Permit

Title 40 CFR 122.28 provides for the issuance of general permits to regulate discharges of waste which result from similar operations, are the same types of waste, require the same effluent limitations, require similar monitoring, and are more appropriately regulated under a general permit rather than individual permits. The United States Environmental Protection Agency (EPA), Region IX, has granted authorization for the State to issue general permits.

A general permit for existing and proposed discharges of extracted and treated groundwater polluted by VOCs into surface waters of the CRBR meets the requirements of 40 CFR 122.28. To qualify for this general permit, proposed discharges must:

a. Result from substantially similar operations;

b. Be the same types of waste;

c. Require the same effluent limitations for the protection of the beneficial uses of surface waters in the CRBR;

d. Require similar monitoring; and

e. Be more appropriately regulated under a general permit rather than individual permits.

3. Status of Permit

On June 11, 1998, the Regional Board adopted General WDRs Order No. 98-400 (NPDES Permit No. CAG917001) in accordance with 40 CFR 122.28 to regulate discharges of extracted and treated

groundwater resulting from the cleanup of groundwater polluted by volatile organic compounds (VOCs) into surface waters. Pollution of these sites is typically caused by leaky containment vessels for fuel, solvents, and other wastes at service stations and similar operations. Recent developments in treatment technology, laboratory detection methods, and State water quality criteria for these constituents have made it necessary to revise Order No. 98-400.

This general permit updates Order No. 98-400 and establishes WDRs for discharges resulting from the cleanup of VOC polluted groundwater. Cleanup of these sites involve similar treatment technologies and result in similar waste discharges. The regulation of these discharges includes similar effluent limits and monitoring requirements. Consequently, these discharges are efficiently regulated with a general permit.

4. Description of Discharge

All discharges authorized under this General Permit are of extracted and treated groundwater resulting from the cleanup of groundwater polluted by volatile organic compounds (VOCs) into surface waters. Pollution of these sites is typically caused by leaky containment vessels for fuel, solvents, and other wastes at service stations and similar operations. VOCs of concern include petroleum hydrocarbons (gasoline, diesel, kerosene, fuel oil, and heavier ranges), purgeable hydrocarbons, aromatic hydrocarbons, and fuel octane enhancers (methyl tertiary butyl ether (MTBE), methanol, ethanol, tertiary butyl alcohol (TBA), and di-isopropyl ether).

5. Receiving Water

Coverage under this General Permit is available to discharges throughout the Colorado River Basin Region. The beneficial uses of waters throughout the Region include:

a. Municipal and Domestic Supply (MUN)
b. Agricultural Supply (AGR)
c. Aquaculture (AQUA)
d. Industrial Service Supply (IND)
e. Groundwater Recharge (GWR)
f. Fresh Water Replenishment (FRSH)
g. Water Contact Recreation (REC I)[1,2]
h. Non-Contact Water Recreation (REC II)[1]
i. Warm Water Habitat (WARM)
j. Cold Freshwater Habitat (COLD)
k. Wildlife Habitat (WILD)
l. Hydropower Generation (POW)
m. Preservation of Rare, Endangered or Threatened Species (RARE)[3]

6. Basis for Limitations in the Proposed General WDRs

This Order includes requirements that implement the CRBR's Water Quality Control Plan (Basin Plan), which was adopted by the Regional Board on November 17, 1993 and subsequently approved by the Office of Administrative Law on August 3, 1994. The Basin Plan specifies water quality objectives and beneficial uses for the waters of the CRBR.

[1] Unauthorized Use
[2] The only REC I usage that is known to occur is from infrequent fishing activity
[3] Rare, endangered, or threatened wildlife exists in or utilizes some of these waterway(s). If the RARE beneficial use may be affected by a water quality control decision, responsibility for substantiation of the existence of rare, endangered, or threatened species on a case-by-case basis is upon the California Department of Fish and Game on its own initiative and/or at the request of the Regional Board; and such substantiation must be provided with a reasonable time frame as approved by the Regional Board

This General Permit specifies numeric and narrative limits for the control of toxic substances. These limits implement relevant Basin Plan objectives and other State and Federal requirements. These limits are based on best available technology economically achievable and best professional judgement using the following:

a. The 1994 Basin Plan.

b. Code of Federal Regulations (40 CFR Parts 122-144).

c. Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California adopted March 2, 2000 by the State Water Resources Control Board.

d. Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California (California Toxics Rule) (40 CFR 131.38).

e. National Toxics Rule (NTR) (40 CFR 131.36).

f. EPA's Maximum Contaminant Levels (MCLs) for Drinking Water.

g. State Department of Health Services' (DHS) MCLs and State Action Levels.

h. Current analytical detection limits.

Groundwater pollutant plumes are often complex mixtures of hundreds of petroleum-related compounds that make complete chemical analysis very expensive, often impractical, and sometimes impossible due to sample matrix interferences, constituent masking, or the lack of standardized analytical techniques.

Further, neither the State nor the USEPA has proposed or established water quality criteria for many of the petroleum hydrocarbon compounds that are likely to be found in the discharges authorized under this permit. Therefore, indicator constituents for the detection and evaluation of petroleum related compounds will be used to monitor the discharges authorized under this General Permit. The indicators used to evaluate compliance with gasoline and diesel related compounds are benzene, toluene, ethylbenzene, and xylene (BTEX) and total petroleum hydrocarbons (TPH). For chlorinated hydrocarbon solvents such as trichloroethylene (TCE) and tetrachloroethylene (PCE), the specific chemical constituents can be used to determine compliance. The limits for these constituents are based on EPA's and DHS's MCLs and are summarized in the tables below.

Oxygenated fuels have been used in California to reduce air pollution. To date, methyl tertiary-butyl ether (MTBE) is the most widely used fuel oxygenates in California. Other fuel oxygenates that have been used include tertiary-amyl methyl ether (TAME), tertiary-butyl alcohol (TBA) methanol (MeOH), and Disopropyl ether (DIPE). The State DHS has established a drinking water MCL of 13 mg/L for MTBE and an action level of 12.0 for TBA.
A number of treatment methods are available for the treatment of contaminated groundwater. The more commonly used methods include air stripping, air sparging, granular activated carbon adsorption, UV-peroxidation, nutrient enhanced biodegradation, and a combination of two or more of the above technologies. To remediate subsurface soil contamination, vapor extraction systems and in-situ bio-remediation are commonly used. Most of these systems, if designed and operated properly, can lower the concentrations of the pollutants to below detection limits. For constituents without established water quality objectives, technology based standards were applied. Technology based standards were derived from reasonable detection limits for each constituent.

In order to address the wide range of surface water beneficial uses throughout the region, this General Permit applies separate effluent limitations for discharges to water bodies dependent upon the beneficial uses of the receiving waters. Receiving waters that have been designated to support

domestic and municipal supply (MUN) will be held to effluent limitations based on human health and drinking water standards. Discharges to receiving waters that are NOT designated as MUN will be held to standards that protect aquatic life and human health based on the California Toxic Rule. The following tables list the effluent limitations contained in the General Permit and show the criteria used to set the limitation.

EFFLUENT LIMITS FOR MUNICIPAL DESIGNATED WATERS

Constituent	Instantaneous Maximum (ug/L)	Effluent Limit Criteria
Benzene	1.0	DHS MCL
Carbon Tetrachloride	0.25	CTR
Chloroform	100	DHS MCL
1,1-Dichloroethane (1,1-DCA)	5.0	DHS MCL
1,2-Dichloroethane (1,2-DCA)	0.38	CTR
1,1-Dichloroethylene (1,1-DCE)	0.057	CTR
cis-1,2-Dichloroethylene	6	DHS MCL
trans-1,2-Dichloroethylene	10	DHS MCL
Dichloromethane (Methylene Chloride)	4.7	CTR
Di-isopropyl ether (DIPE)	5	Technology
Ethanol	5	Technology
Ethyl benzene	30	EPA MCL (secondary)
Total Lead	15	DHS MCL
Methanol	5	Technology
Methyl tertiary-butyl ether (MTBE)	13	DHS Action Level
Tertiary-amyl methyl ether (TAME)	5	Technology
Tetrachloroethylene (PCE)	0.8	CTR
Toluene	40	EPA MCL (secondary)
Total Petroleum Hydrocarbons (TPHs)	100	Technology
1,1,1-Trichloroethylane (1,1,1-TCA)	200	DHS MCL
1,1,2-Trichloroethylane (1,1,2-TCA)	0.6	CTR
Trichloroethylene (TCE)	2.7	CTR
Trichlorotriflouroethane	5	Technology
Vinyl Chloride	0.5	DHS MCL
Total Xylenes	20	EPA MCL (secondary)

EFFLUENT LIMITS FOR NON-MUNICIPAL DESIGNATED WATERS

Constituent	Instantaneous Maximum (μg/L)	Effluent Limit Criteria
Benzene	70	CTR
Carbon Tetrachloride	4.4	CTR
Chloroform	100	DHS MCL
1,1-Dichloroethane (1,1-DCA)	5.0	DHS MCL
1,2-Dichloroethane (1,2-DCA)	99	CTR
1,1-Dichloroethylene (1,1-DCE)	3.2	CTR
cis-1,2-Dichloroethylene	10	Technology
trans-1,2-Dichloroethylene	140,000	CTR
Dichloromethane (Methylene Chloride)	1,600	CTR
Di-isopropyl ether (DIPE)	5	Technology
Ethanol	1000	Technology
Ethyl benzene	29,000	CTR
Total Lead	15	DHS MCL

Methanol	1000	Technology
Methyl tertiary-butyl ether (MTBE)	13	Technology
Tertiary-amyl methyl ether (TAME)	5	Technology
Tetrachloroethylene (PCE)	8.85	CTR
Toluene	200,000	CTR
Total Petroleum Hydrocarbons (TPHs) 100		Technology
1,1,1-Trichloroethylene (1,1,1-TCA)	200	DHS MCL
1,1,2-Trichloroethylene (1,1,2-TCA)	42	CTR
Trichloroethylene (TCE)	81	CTR
Trichlorotriflouroethane	5	Technology
Vinyl Chloride	525	CTR
Total Xylenes	1750	Technology

7. Antidegradation Policies

Pursuant to 40 CFR 131.12 and State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (collectively the antidegradation policy), the Regional Board shall ensure that any increase in pollutant loading to a receiving water meets the requirements stated in the foregoing policies. At a minimum, permitting actions shall be consistent with the following:

a. Existing in stream water uses and the level of water quality necessary to protect existing beneficial uses shall be maintained and protected;

b. Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, the quality shall be maintained and protected unless the State finds, after full satisfaction of intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social developments in the area in which the waters are located; and

c. In those cases where potential water quality impairment associated with a thermal discharge is involved, the non-degradation policy and implementing method shall be consistent with Section 316 of the Clean Water Act.

The Regional Board, in establishing the requirements contained herein, has taken into consideration the requirements of the State and federal non-degradation policies and has determined that:

a. The conditions and effluent limitations established in this Board Order for discharges of treated groundwater to surface waters in this Region ensure that the existing beneficial uses and quality of surface waters in the Region will be maintained and protected;

b. Discharges regulated by this Board Order should not lower water quality if the terms and conditions of this Board Order are met; and

c. Thermal discharges potentially impairing water quality are not authorized under the terms and conditions of this Board Order, thus, Section 316 of the Clean Water Act is not applicable.

8. Prohibitions and Provisions

Prohibitions D.1 through D.6 of this Order prohibit:

1. Bypass, overflow, discharge or spill of untreated or partially treated groundwater.

2. The discharge of waste to land not owned or controlled by the discharger.

3. Discharge of treated wastewater at a location or in a manner different from that approved by the Regional Board's Executive Officer.

4. The bypass or overflow of untreated groundwater to waters of the State, except as allowed in the Standard Provision No. 13, as contained in the Standard Provisions for National Pollutant Discharge Elimination System Permit (hereinafter Standard Provisions), dated October, 1990.

5. Extraction of groundwater for treatment in excess of the design capacity of the treatment system as specified in the Dischargers NOA from the Executive Officer.

6. Discharge of material other than extracted and treated groundwater from the investigation and cleanup of VOC polluted groundwater and added treatment chemicals approved by the Regional Board's Executive Officer.

Monitoring of the groundwater treatment system influent and effluent and the receiving waters is required to satisfy the Basin Plan and NPDES requirements. Monitoring is the primary means of ensuring that the permit limitations are met and the basis for enforcement actions against dischargers who are in violation of their permit limits. This Board Order authorizes and directs the Regional Board's Executive Officer to prescribe a monitoring program appropriate for the type of cleanup and proposed discharge. Results of the Self-Monitoring Program analysis will be reviewed after six months and on a case-by-case basis, the Regional Board's Executive Officer may modify the Self-Monitoring Program to cover constituents of concern.

The Board Order will require that Discharger(s) (parties deemed responsible by the Regional Board for remediation of groundwater polluted by VOCs) to file a Notice of Intent (NOI) to be eligible for coverage under this General Permit. The NOI shall consist of a Report of Waste Discharge (Form 200), an NPDES Application Form 12D, and the appropriate filing fee. Additionally, the Discharger must submit the following information:

a. A discussion of how the proposed discharge is consistent with the type of discharge eligible for coverage under this General Permit;

b. An explanation of why a discharge to surface waters is the only feasible method for disposing of the treated effluent supported by a letter from the local publicly owned treatment works (POTW) stating that they cannot accept the discharge;

c. A general discussion of the proposed cleanup project including descriptions of the extraction method, treatment processes, design parameters, flow rates and expected treatment performance;

d. A schematic of the treatment process;

e. A site map showing the extraction wells, monitoring wells, treatment site, and the storm drain or surface water discharge location;

f. A map showing the path from the point of initial discharge to the ultimate location of discharge; and

g. Any other information deemed necessary by the Board's Executive Officer.

The Board Order also contains standard provisions, which are placed in all NPDES permits issued by the Regional Board. These provisions include compliance with a self-monitoring program, immediate compliance with the Board Order, and submittal of an application for proposed discharge not later than 180 days in advance of the expiration of WDRs.

9. Discharge Authorization Letter

Upon receipt of a complete NOI and the additional information required by items "a" through "g" above, the Regional Board's Executive Officer will determine whether the proposed discharge complies with the following criteria:

1. The proposed discharge results from the cleanup of groundwater polluted by VOCs;

2. The proposed discharge is to surface waters in this region;

3. The proposed discharge is classified as a minor discharge; and

4. The proposed treatment system and associated operation, maintenance, and monitoring plans are believed to be reasonably capable of meeting the provisions, prohibitions, effluent limitations, and receiving water limitations of this proposed Board Order.

If the Regional Board's Executive officer determines that the proposed discharger meets this criteria, a Notice of Authorization (NOA) will be issued.

10. Expiration Date

The expiration date of the General Permit is June 26, 2007.

11. Written Comments

Interested parties and agencies are invited to submit written comments on the proposed WDRs and the Regional Board's Executive Officer's proposed determinations. Comments should be submitted in writing not later than April 24, 2002, to:

Executive Officer
California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

The application number shall appear on the first page of any submitted comments. All comments received by the above date will be considered in the formulation of the final determinations.

12. Public Hearing

The WDRs will be considered by the Regional Board at a public hearing to be held at the City of La Quinta City Council Chambers, 78495 Calle Tampico, La Quinta on June 26, 2002.

13. WDRs Appeals

Any person may petition the State Board to review the decision of the Regional Board regarding WDRs. A petition must be made within 30 days of the Regional Board's hearing.

14. Additional Information

Persons wishing further information may write to the following address:

California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

or call the Regional Board at (760) 346-7491.